

# Module 3.

Virginia Erosion & Sediment Control Program

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# Module 3a.

Statutory and Regulatory Requirements: Virginia Erosion and Sediment Control Law and Regulations

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As of July 1 2013:

A lot of local ESC ordinances are out of date!

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## History of the ESC law and Regulations Since 2010

Integration Bill:

1. Changes to ESC Law
2. Changes to ESC Regulations
3. Changes to ESC Training and Certification Regulations

Recodifying and rewording as part of the move:

1. ESC Law (was 10.1-560 – 576 → now 62.1-44.15:51 - 66)
2. ESC Regulations (was 4VAC50-30 → now 9VAC25-840)



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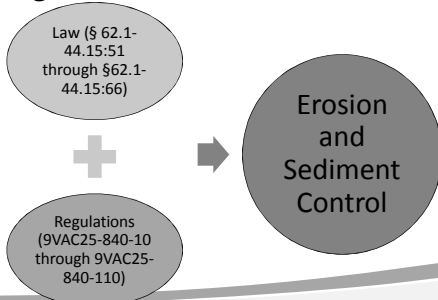
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## Erosion and Sediment Control in Virginia



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## Importance of Understanding the Law

- The ESC Law is the legal basis for the ESC program.
- The Law establishes the rights and responsibilities of: VESCP and the public and private land users who must comply.
- A good understanding of the Law helps to effectively implement local ESC programs.
- Unless local officials act within the limits of the law, enforcement actions may become unsuccessful.



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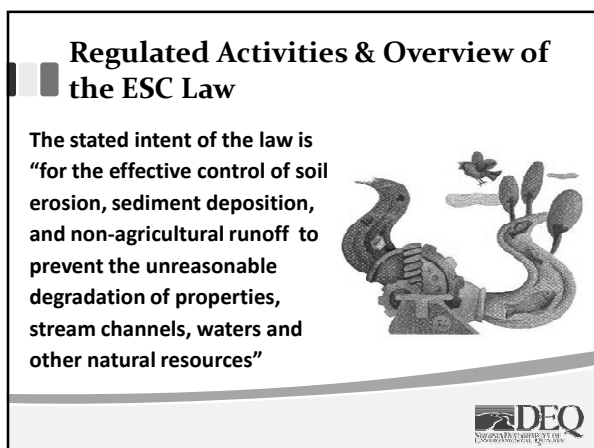
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## Definitions (Section 62.1-44.15:51.):

### VESCP

An authority approved by the Board to operate a Virginia Erosion and Sediment Control Program ... include:

- a state entity, including the Department;
- a federal entity;
- a district,
- county, city, or town;
- linear projects subject to annual standards and specifications (electric, natural gas, and telephone utility companies, interstate and intrastate natural gas pipeline companies, railroad companies)



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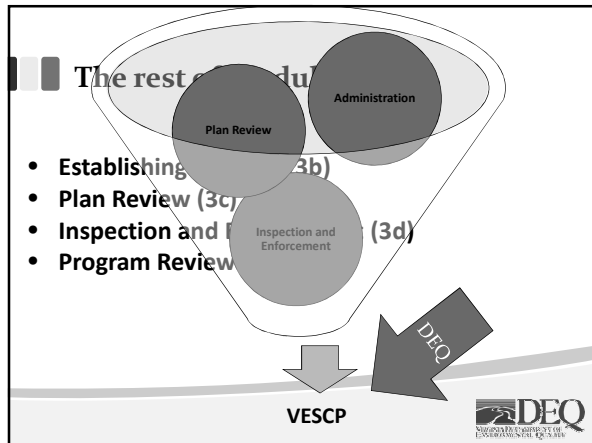
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## The rest of the module

- Establishing (3b)
- Plan Review (3c)
- Inspection and Enforcement (3d)
- Program Review



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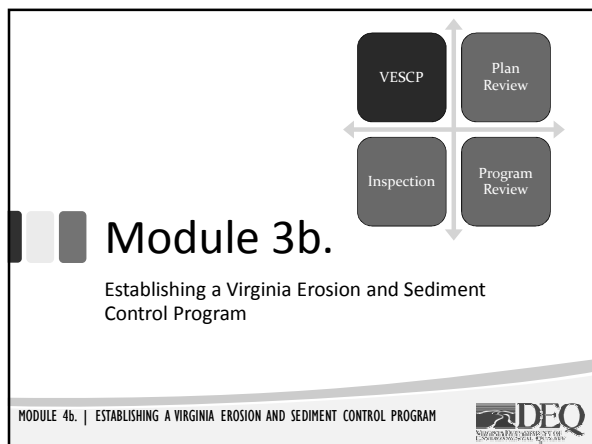
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## Module 3b.

Establishing a Virginia Erosion and Sediment Control Program

MODULE 4b. | ESTABLISHING A VIRGINIA EROSION AND SEDIMENT CONTROL PROGRAM



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## Role of State Water Control Board and DEQ


(62.1-44.15:52)

The State Water Control Board

- Develop a program
- Adopt Regulations
- Provide technical assistance
- Adopt Minimum Standards
- Conduct periodic compliance reviews

DEQ

- Administer education and training
- Ensure qualified field inspectors




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## Who needs to adopt a VESCP?

Must adopt a VESCP

- Counties
- Cities

May adopt a VESCP


- Towns

Operate a VESCP through submittal of annual specifications

- State entities
- Federal entities
- Linear projects

(Detailed in 62.1-44.15:54-A)

**Note:** Currently there are 164 ESC programs




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## Required VESCP Personnel

VESCPs are required to have the following certified persons on staff:

Program Administrator


Inspector

Plan Reviewer



Or a combined administrator who may be the same person.

Detailed in 62.1-44.15:53




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### Roles and Responsibilities in a VESCP– Program Administrator

- Ensures plan review, approval, inspections, and enforcement are being properly conducted
- reporting;
- record keeping;
- fee collections; and
- Ordinance updates





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### Roles and Responsibilities in a VESCP– Inspector

- Conducts periodic inspections of active construction sites to ensure proper installation, construction, and function of BMPs and other ESC measures
- Documentation of inspection
- Enforcement





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### Roles and Responsibilities in a VESCP– Plan Reviewer

- Reviews ESC plans to ensure they adhere to the VESC Regulations, ESC Handbook, and local ordinance(s)





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## Roles and Responsibilities in a VESCP– Combined Administrator

“who may be the same person”

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## Assistance with VESCP responsibilities

Detailed in  
62.1-44.15:58-B

Engineering/  
consulting firms

The VESCP is authorized to use an outside entity to assist with the administration, plan review and inspection of land disturbing activities.

Soil and water  
conservation districts

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## Authorization for more stringent standards

Detailed in  
62.1-44.15:65

- Local programs may require more stringent standard except in plan review and permitting
- The more stringent standards need to have a defensible or scientific basis
- Must go through the public hearing process at the locality

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## Scientific basis for more stringent standards



- Prevent further degradation to water resources
- Address total maximum daily load requirements
- Protect exceptional state waters
- Address specific existing water pollution including:
  - Nutrient and sediment loadings
  - Stream channel erosion
  - Depleted groundwater resources
  - Excessive localized flooding within the watershed

Detailed in 62.1-44.15:65



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## Civil Penalties



Local programs are allowed to adopt an ordinance providing for Civil penalties in lieu of criminal sanctions for violations.

Civil penalty for any one violation with an approved plan shall be \$100 to 1,000 per day , with a max. total of \$ 10,000

Detailed in 62.1-44.15:54-K



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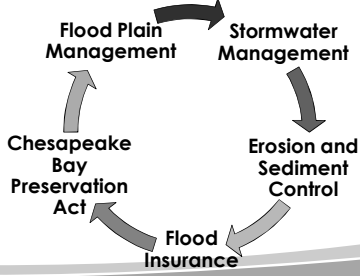
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## VESCP Integration





Detailed in 62.1-44.15:54-D



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## Reporting to DEQ



Listing of all LDA for which the authority has approved an ESC plan





Detailed in 62.1-44.15:59

VESCP Authority

DEQ

On a schedule established by DEQ

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## Annual Standards & Specifications

State Agencies (must)

Linear Projects (must)

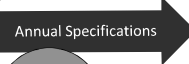
Federal Agencies (may)

Wetland Mitigation Banks (may)


Annual specifications required for:

- electric
- telephone companies
- natural gas pipeline companies
- railroad companies

Annual Specifications




DEQ



Detailed in 62.1-44.15:56 C

C. Comply with more stringent local program standards.



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## Module 3c.


Plan Review Process

VESCP

Plan Review

Inspection

Program Review



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## Approved Plan Required

Detailed in 62.1-44.15:55-A






LDA?

First

- Approved ESC plan before starting land disturbing activities
- Evidence of Stormwater Management permit coverage



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## What is an Adequate Plan?





- Does the plan meet Minimum Standards in the Erosion and Sediment Control Regulations (9VAC25-840-40)
- Does it meet more stringent requirements of VESCP authority (if applicable)
- Are all problems of erosion and sedimentation adequately addressed?



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## Approved Plan Timeline

Detailed in 62.1-44.15:55-B





Plan Review

- 60 days
- Provided written comments if inadequate within 45 days
- Review of resubmitted plan in 45 days



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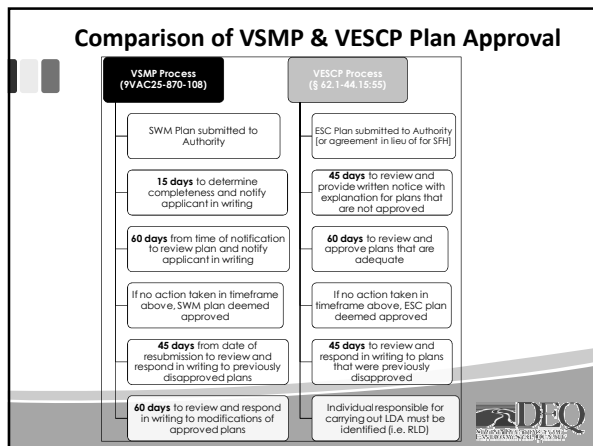
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### Plan Approval Timeline (RLD)

**Name of the RLD needs to be provided at time of plan approval**

**Option to waive RLD certificate for construction of single-family homes under agreements in lieu of plans**



**Detailed in 62.1-44.15:55-B**




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### Change of Plan?


**Plan may be changed when:**

1. Inspection reveals inadequacies
2. Change in circumstances

(But all changes need to be consistent with the law, regulations and specifications)



**Detailed in 62.1-44.15:55-C**




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## Variance Procedure


Request

- At time of plan submittal
- During construction when field conditions/situations changes
- Must be done in writing
- Cannot be done solely for economic reasons (i.e. too expensive)

Review

- 10 days
- After 10 days, it is automatically denied
- Review must be judicious

Regulations  
Detailed in  
9VAC25-840-50



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## Additional Approved Plan Requirements

(A) Provides option for submittal of multi-jurisdiction projects (can be done by the Department)

(F) Allows local programs to require plan approval for lands identified as "Erosion Impact Area".

(G) Identifies the land owner as responsible for plan submittal & approval.

Detailed in 62.1-44.15:55-A, F & G



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## Additional Approved Plan Requirements

- Requires an approved plan before issuance of permits for land disturbing activities
- Coverage under the VPDES Construction General Permit for Stormwater required (after July 1, 2014)
- Provides option to require bonds or surety
- Requires return of unused bonds or surety within 60 days of adequate stabilization

Detailed in 62.1-44.15:57



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# Module 3d.

## Inspection and Enforcement

VESCP

Plan Review

Inspection

Program Review

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# Inspections

Detailed in 62.1-44.15:58

Requires inspections of land disturbing activities by program authority.

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# Regulations

Detailed in 9VAC25-840-60

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## Alternative Inspection Program




VS



- Approved by the Board
- Established in writing
- Based on a system of minimum priorities that address:
  - the amount of disturbed project area,
  - site conditions, and
  - stage of construction
- Documented by

Regulations  
Detailed in



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## Right of entry

Provides the right of entry by the Department or VESCP of any property for the inspection and enforcement.





Detailed in 62.1-44.15:60



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## Monitoring Reports



Authority may require monitoring reports from the the person responsible for the project (RLD).



Detailed in 62.1-44.15:58



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## Potential Violation Overview




Detailed in 62.1-44.15:58-A & C

A. "Notice to Comply" procedure

C. "Stop Work Order" procedure

- After notice to comply, unless-
- LDA without an approved plan
- Imminent danger
- Length of time Stop Work is in effect

Allows for other enforcement action to commence...

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## Appealing a Stop Work Order

Detailed in 62.1-44.15:58

The owner may appeal the issuance of a stop work order to the circuit court

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## Stop Work Order By Board

- Allows property owners to request state intervention
- Allows Board to pursue Stop Work Order

**Detailed in 62.1-44.15:64**

Aggrieved property owner gives written notice to VESCP & DEQ Director

DEQ investigates complaint

If VESCP authority response does not stop alleged violation after 30 days, property owner may ask DEQ for stop work order

DEQ gives written notice to VESCP authority of intention to issue stop work order

If VESCP authority does not stop violation within 10 days of notice, DEQ may issue a stop work order after a hearing

Due Process (APA)

DEQ  
NEW HAMPSHIRE DEPARTMENT OF  
ENVIRONMENTAL QUALITY

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## Judicial Appeals

**Detailed in 62.1-44.15:62**

Final decisions of local and state program authorities to be judicially appealed

DEQ  
NEW HAMPSHIRE DEPARTMENT OF  
ENVIRONMENTAL QUALITY

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## Penalties, injunctions, and other legal actions

**Detailed in 62.1-44.15:63**

- Violators shall be guilty of a Class 1 misdemeanor
- Outlines procedure for administration of civil penalties

DEQ  
NEW HAMPSHIRE DEPARTMENT OF  
ENVIRONMENTAL QUALITY

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## Injunctive Process

Detailed in  
62.1-44.15:  
63-C

Affected Property Owner	Designated Land Owner, VESCP Authority, DEQ	Circuit Court
Write letter		No response in 15 days?



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## Civil Penalties

Civil Penalties

Behavior	Assessing penalty	Penalty
Violated, failed, neglected or refused to obey any of the following: VESCL Regulations or order of the Board Local VESCP authority order, notice or requirement DEQ order, notice or requirement Permit	Court may assess a civil penalty of \$2,000/day for each violation.	<p>Subsection K of § 62-1-44.15-53.</p> <p>Penalties assessed by court paid into treasury of locality where project located.</p> <p>If locality or its agent is the violator, penalties paid into state treasury</p>


**DEQ**  
 DIVISION OF ENVIRONMENTAL QUALITY  
 IOWA DEPARTMENT OF NATURAL RESOURCES

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# Module 3e.

## DEQ Compliance Review of a VESCP



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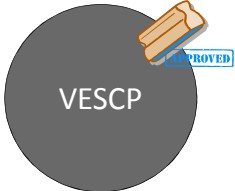
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Local ESC Programs




Detailed in  
62.1-44.15:54-C



VESCP

Part C - Local programs shall be approved by the Board



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Local ESC Programs




Detailed in  
62.1-44.15:54-F

If a compliance review by the Board reveals that the program is inconsistent:

The Board shall establish a schedule for the VESCP authority to come in compliance.

The Board may impose civil penalties, revoke program approval, or take legal action.



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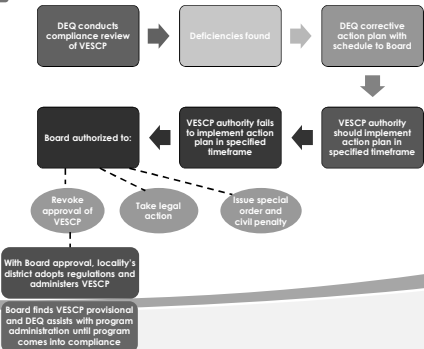
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Local ESC Programs




Detailed in  
62.1-44.15:54



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graph TD
    A[DEQ conducts compliance review of VESCP] --> B[Deficiencies found]
    B --> C[DEQ corrective action plan with schedule to Board]
    C --> D[VESCP authority should implement action plan in specified timeframe]
    D --> E[VESCP authority fails to implement action plan in specified timeframe]
    E --> F[Board authorized to:]
    F --> G[Revoke approval of VESCP]
    F --> H[Take legal action]
    F --> I[Issue special order and civil penalty]
    G --> J[With Board approval, locality's district adopts regulations and administers VESCP]
    H --> J
    I --> J
    J --> K[Board finds VESCP provisional and DEQ assists with program administration until program comes into compliance]
    
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Local ESC Programs



Detailed in  
62.1-44.15:54-H

Part H – allows provisional operation of the VESCP



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Module 3f.

Minimum Standards 1-18



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MS-1 (Site stabilization)




Not at Final Grade

- Stabilize in 14 days
- Temporary seeding + Mulch
- Mulch
- Permanent stabilization if dormant > 1 year



At Final Grade

- Stabilize in 7 days
- Permanent or Temporary Seeding + Mulch
- Mulch



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### **MS-2 (Topsoil stockpiles)**

- Soil stockpiles and borrow areas shall be stabilized or protected with sediment trapping measures
- Applies to on and off-site stockpiles and borrow areas



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### **MS-3 (Final stabilization)**

- A permanent vegetative cover shall be established on areas not otherwise stabilized
- Permanent vegetation shall not be considered established until it is uniform, mature enough to survive and will inhibit erosion



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### **MS-4 (Perimeter controls)**

- Sediment basins, traps, dikes and sediment barriers intended to trap sediment shall be installed as a first step measure
- They must be made functional before up-slope disturbance takes place



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**MS-5 (Earthen structures)**

- Stabilization measures shall be applied to earthen structures immediately after installation


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**MS-6 (Traps and basins)**



Sediment traps and sediment basins shall be designed and constructed based on the total drainage area served by the trap or basin



Sediment Trap  
< 3 acres



Sediment Basin  
≥ 3 acres


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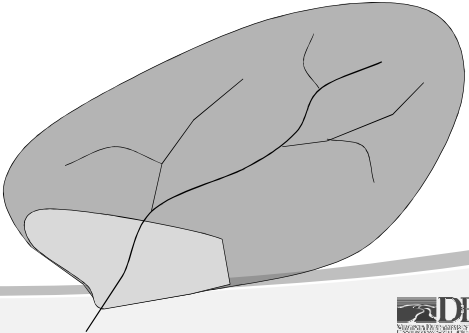

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**MS-6 (Traps and basins)**


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**MS-10 (Inlet protection)**

All storm sewer inlets made operational during construction shall be protected so that sediment laden water cannot enter without first being filtered or treated to remove sediment

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**MS-11 (Outlet protection)**

Before newly constructed stormwater channels or pipes are made operational, adequate outlet protection, and any temporary or permanent channel lining shall be installed

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**MS-12 (Work in live watercourse)**

- When working in a live watercourse, precautions shall be made to minimize encroachment
- Non-erodible materials shall be used
- Earthen fill may be used if armored by non-erodible materials

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**MS-13 (Temp. Stream crossings)**

When a live watercourse must be crossed by construction vehicles more than twice in a six month period, a temporary stream crossing shall be provided





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**MS-14 (Other applicable regulations)**

All applicable federal, state and local regulations pertaining to working in watercourses shall be met





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**MS-15 (Stream bank stabilization)**

The bed and banks of a watercourse shall be stabilized immediately after work in the watercourse is complete





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**MS-16 (Underground utility lines)**

Underground utility lines shall be installed in accordance with the following standards in addition to other applicable criteria:

- No more than 500 feet of open trench at one time
- Excavated material shall be placed on the up-hill side of the trench





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**MS-16 (Underground utility lines)**

- Effluent from de-watering shall be filtered or passed through an approved sediment trapping device
- Material used for backfilling shall be compacted to minimize erosion
- Re-stabilization shall be accomplished in accordance with these regulations
- Applicable safety regulations shall be complied with



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**MS-17 (Construction entrance)**

Where construction vehicle access routes intersect public or paved roads, provisions shall be made to minimize transport of sediment onto the paved surface





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### MS-17 (Construction entrance)

When sediment is deposited on the road surface, it shall be removed by:

- Shoveling & sweeping
- Then disposal

Street washing is only done after shoveling and sweeping

**Applies to single family dwelling lots !**



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### MS-18 (End of project)

All temporary erosion and sediment control measures shall be removed within 30 days of final stabilization or when no longer needed





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### What about MS-19?

- The VSMP Law and Regulations regulate LDA  $\geq 1$  acre
- The ESC Law and Regulations regulate LDA  $\geq 10,000$  square feet (or stricter; i.e. CBPA=2,500 sf)
- MS-19 regulates post construction stormwater discharge
- MS-19 is still applicable for areas  $\geq 10,000$  square feet and  $< 1$  acre
- But MS-19 was changed by the consolidation bill



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## Changes to MS-19 as a result of the "Consolidation Bill"

Sections:

- Introduction → Natural Channel Design
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  - m
  - n
- Refer to Stormwater Law and Regulations



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## MS-19

Protection of downstream properties and waterways from:

- Sediment Deposition
- Erosion & damage due to...



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## MS-19

increases in:

- Volume
  - Velocity
- Volume X Velocity = Energy**
- Peak Flow Rate of a stated frequency storm of 24 hour duration



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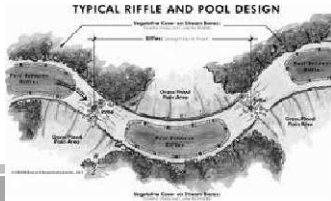
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## MS-19 (Introduction)

### Stream Restoration and Relocation Projects

! Those that use natural channel design are not man-made channels and are exempt from any flow rate capacity and velocity requirements for natural or man-made channels:



## MS-19 (I)

(I.) For projects approved before July 1, 2014, if you can meet the energy balance equation in the stormwater regulations you satisfy MS-19


## Energy balance equation (40VAC50-60-65)

$$Q_{post} \leq I.F. \times (Q_{pre} \times RV_{pre}) / RV_{post} \text{ or}$$

$$(Q_{post} \times RV_{post}) \leq I.F. \times (Q_{pre} \times RV_{pre})$$

Where

- $Q_{pre}$  = Pre-development peak flow rate (cfs)
- $RV_{pre}$  = Pre-development runoff volume (in.)
- $Q_{post}$  = Post-development peak flow rate (cfs)
- $RV_{post}$  = Post development runoff volume (in.)
- I.F. = Improvement factor (0.8 for sites > 1 acre, 0.9 for sites < 1 acre)

**MS-19 (m & n)**  
  
(m.) Projects approved after July 1, 2014, must comply with the Virginia Stormwater Management Act including the Grandfathering provisions.  
  
(n.) Meeting the requirements of the Virginia Stormwater Management Act satisfies MS-19.  
  


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